Name: Date: Period: \_\_\_\_

**Photosynthesis WebQuest**

***As you navigate through the internet visiting the site below, read each internet passage. Be careful not to plagiarize your answers from the internet; unless you are directed to “copy” something you should summarize what you read on the internet.***

***PART I - Visit “Nova Online” (12 points)***

[**http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html**](http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html)

*Click “Go to Illuminating Photosynthesis” Click “The Cycle”.*

1. What ingredient is required to ensure that both the plant and the person breath? \_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C*lick “Atomic Shuffle”- When it shows the chemical equation click on “Note about this equation”. This will present a simpler equation that is an easier way of looking at the overall equation.*

2. Give the simpler equation for photosynthesis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Where does the oxygen come from in the cycle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Click on “Three Puzzlers” Explain the correct answers for each.*

4. Puzzle one: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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5. Puzzle two: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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6. Puzzle three: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***PART II - Visit the “Stars and Seas” page. (6 points)***

[**http://www.starsandseas.com/SAS%20Cells/SAS%20cellphysiol/SAS%20photosyn/cellphotosyn.htm**](http://www.starsandseas.com/SAS%20Cells/SAS%20cellphysiol/SAS%20photosyn/cellphotosyn.htm)

*Read the Section On “Photosynthesis ". Briefly explain each of the three steps of photosynthesis.*

7. Part one:

***\_\_\_\_\_\_\_\_\_ + Light + \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ —> \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_***

8. Part two:

\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_ —> ***\_\_\_\_\_\_\_\_\_\_***

Part three:

***CO2 + \_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_ —> \_\_\_\_\_\_\_\_\_\_***

***Visit “Thinkquest”(6 points)***

[**http://www.calpoly.edu/~mforte/dream/p3.html**](http://www.calpoly.edu/~mforte/dream/p3.html)

10. Describe the Step One of photosynthesis. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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11. Describe the Step Two of photosynthesis. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***PART III - Visit the “BioCoach” (18 points)***

[**http://www.phschool.com/science/biology\_place/biocoach/photosynth/intro.html**](http://www.phschool.com/science/biology_place/biocoach/photosynth/intro.html)

12. Copy and label the picture from Concept 1: An overview of Photosynthesis.

*2. In the contents box click on “Factors”*

State and describe the three factors affecting the rate of photosynthesis.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*3. Look at Concept 2 and 3. Do the experiment in Concept 3.*

Which wavelengths of light do bacteria prefer to use for photosynthesis (what colors)?

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4. Copy and label Concept 4: Structure of the Leaf.

5. Copy and label Concept 5: Structure of a Mesophyll Cell.

6. Copy and label Concept 6: Chloroplast Structure.

7. Look at Concept 7 and 8. Copy and label Concept 8: Photosynthesis.

***PART IV - Visit “Wikipedia-:the free Encyclopedia” (8 points)***

[**http://en.wikipedia.org/wiki/Photosynthesis**](http://en.wikipedia.org/wiki/Photosynthesis)

*1. In the contents box click on “Discovery”*

Briefly describe the discovery of photosynthesis by explaining the events of the first three scientists. **Underline the name of each scientists as you explain each discovery.**

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